

**TABLE 1 Dissolution of various copper minerals in sulfuric acid and sodium cyanide solutions**

Mineral	Composition	Approximate Dissolution In Sulfuric Acid Solution	Approximate Dissolution Sodium Cyanide Solution
<b>Oxides</b>			
Atacamite	$\text{Cu}_2\text{Cl}(\text{OH})_3$	100	100
Azurite	$2\text{CuCO}_3\text{Cu}(\text{OH})_2$	100	100
Cuprite	$\text{Cu}_2\text{O}$	70	100
Chrysocolla	$\text{CuSiO}_3 \cdot 2(\text{H}_2\text{O})$	100	45
Malachite	$\text{CuCO}_3\text{Cu}(\text{OH})_2$	100	100
Native Copper	Cu	5	100
Tenorite	CuO	100	100
<b>Secondary Sulfides</b>			
Chalcocite	$\text{Cu}_2\text{S}$	3	100
Covellite	CuS	5	100
<b>Primary Sulfides</b>			
Bornite	$\text{Cu}_5\text{FeS}_4$	2	100
Chalcopyrite	$\text{CuFeS}_2$	2	7

NOTE: Samples are generally finely ground (-150 mesh) and reaction time is generally one hour or less.